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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/073,243 | 02/13/2002 | Hidegori Yamada | 111933 | 4434 |
| 25944 | 7590 | 06/28/2004 | | EXAMINER |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | | LUU, THANH X |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------------------|-------------------------|
| Office Action Summary | Applicant No. | Applicant(s) |
| | 10/073,243 | YAMADA ET AL. |
| | Examiner Thanh X Luu | Art Unit 2878 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 28 May 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s). _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

This Office Action is in response to amendments and remarks filed May 28, 2004. Claims 1-12 are currently pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 6, 9, 10 and 12, are rejected under 35 U.S.C. 102(b) as being anticipated by Losch et al. (U.S. Patent 5,054,870).

Regarding claims 1, 3, 4, 6, 9, 10 and 12, Losch et al. disclose (see Figures 1 and 2) an optical wiring circuit, comprising: a board (4); at least one planer optical waveguide (3) disposed on a principal surface of the board; at least one first optical wave guide (1, left instance) having a first end optically connected to the planer optical waveguide; and at least one second optical wave guide (1, right instance) having a second end optically connected to the planer optical waveguide; wherein the first optical wave guide is extended toward one side surface (one end surface of the board) and has a first other end connected to the first end, being located in a neighboring portion (another portion of the board) of the side surface; and the second optical wave guide is extended toward the side surface (the end surface of the board), and has a second other end connected to the second end, being located in a neighboring portion of the side surface. The planer optical waveguide is disposed in parallel to the principal

surface of the board and the wave guides comprise optical fibers. In addition, Losch et al. disclose (see column 3, lines 50-55) the planer optical waveguide includes steps (slanted or tapered surfaces) connected to the first and second ends. Losch et al. further disclose (see Figures 1 and 2) an electric circuit board (5); and an opto-electric conversion element (6) disposed on the electric circuit board as claimed. The wave guides face the side surface since the end surface of the wave guides point or face toward an edge of the board.

3. Claims 1-12, are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura et al. (U.S. Patent 5,757,989).

Regarding claims 1-12, Yoshimura et al. disclose (see Figure 2) an optical wiring circuit, comprising: a board; at least one planer optical waveguide (5) disposed on a principal surface of the board; at least one first optical wave guide (19) having a first end optically connected to the planer optical waveguide; and at least one second optical wave guide (not labeled) having a second end optically connected to the planer optical waveguide; wherein the first optical wave guide is extended toward one side surface (an end surface of the board) and has a first other end connect to the first end, being located in a neighboring portion of the side surface; the second optical wave guide is extended toward the side surface, and has a second other end connected to the second end, being located in a neighboring portion of the side surface. The wave guides face a side surface since the ends point or face an edge of the board. The diffraction grating diffuses a light beam as claimed. The planer optical waveguide is disposed in parallel to the principal surface of the board and the wave guides comprise optical fibers.

Yoshimura et al. also disclose (see Figure 2) the wave guides disposed in grooves. In addition, Yoshimura et al. disclose (see Figure 2) the planer optical waveguide includes steps (at 18) connected to the first and second ends. Yoshimura et al. further disclose (see Figure 2) an electric circuit board (17); and an opto-electric conversion element (16) disposed on the electric circuit board as claimed. Yoshimura et al. also disclose (see Figure 31) a plurality of optical wiring circuits which are superimposed on one another in a sheet side surface direction.

Response to Arguments

4. Applicant's arguments filed May 28, 2004 have been fully considered but they are not persuasive.

Applicant asserts that the prior art does not disclose the wave guides being extended toward a side surface of the board and the other end of the wave guide being located in a neighboring portion of the side surface. Examiner disagrees. Since the wave guides of the prior art run along the board, the wave guides extend towards a side surface (an edge) of the board. Furthermore, since the wave guides are located in or on the board itself the other end of the wave guide is located "in a neighboring portion" of the side surface.

Applicant also asserts that the prior art does not disclose wave guides where an end face a side surface. Examiner disagrees. Since the wave guides of the prior art face or point in the direction of a side surface (an edge of the board), the prior art does disclose such limitations.

In addition, Applicant asserts that Yoshimura et al. do not disclose an opto-electronic circuit. Examiner disagrees. It is unclear how an optical sensor 16 (see Fig. 2) in an IC 17 that detects optical signals does not constitute an opto-electronic circuit with a plurality of wiring circuits (within the IC).

Thus, as set forth above, this rejection is proper.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X. Luu
Primary Examiner
Art Unit 2878

06/04